State Environmental Policy Act (SEPA)

ENVIRONMENTAL CHECKLIST

WAC 197-11-960

PLEASE READ CAREFULLY BEFORE COMPLETING THE CHECKLIST!

Purpose of Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, contact the Pierce County Planning and Land Services Department for assistance.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Refer to the following instructions to assist in completing this checklist.

THE ORIGINAL SIGNED CHECKLIST
MUST BE SUBMITTED AT TIME OF APPLICATION

Environmental Policy Act (SEPA)

ENVIRONMENTAL CHECKLIST

Name of Proposed Project: Diversion Repair and Spillway Replacement

Applicant: Electron Hydro, LLC

Address: 1800 James Street, Suite 201

City/State/Zip: Bellingham, WA Phone: (360) 738-9999

Agent: Chris Spens

Address: Same as above

City/State/Zip: Phone: (360) 746-3435

Location of Project: Puyallup River

Address:

Section: 3 Quarter: Township: 16 Range: 6E

Tax Parcel Number(s): 0616032001

Date Checklist Prepared: 3/10/2017

Agency Requesting Checklist:

GENERAL INFORMATION

1. Proposed timing or schedule (including phasing, if applicable):

Begin site work June 1, 2017, start river work July 15 through September 15, 2017, finish all upland work by October 30th, 2017.

2. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? ☒ Yes ☐ No If yes, explain.

A future fish exclusion facility will be designed after diversion repairs and spillway replacement has been completed and observed for performance for approximately one year. Design, permitting and construction of this facility would occur in 2017-2018.

3. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A Biological Evaluation (BE) has been prepared as it relates to potential ESA listed species.

4. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal?

☐ Yes ☒ No If yes, explain.

5. List any government approvals or permits that will be needed for your proposal, if known.

Section 404 Army Corps Nationwide Permit #3, Section 401 Water Quality Certification, State HPA, County Shoreline Substantial Development Permit, CZM consistency.

6. Give brief, complete description of your proposal, including proposed uses, size of the project, and site characteristics. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The proposed project is limited to the repair and replacement of the existing spillway and reinforcement of the existing riverbank protection of the 113 year old Electron hydropower project wooden diversion structure. The spillway was previously modified and replaced in the mid-1900's as a fixed spillway and then again in 2010 as a system of three Obermeyer fold-down steel gates. The replacement spillway would use a 12 ft diameter by approximately 70ft long inflatable rubber bladder in lieu of the current triple gate spillway. A small sand sluice bypass would be incorporated into the spillway foundation end wall. The replacement spillway bladder would span about 35% of the approximately 200ft wide existing diversion structure. There would be no change in diversion pool elevation, amount of water diverted or change in generation as a result of the spillway replacement. The spillway replacement would allow for the passage of river bedload (sediment), prevent large quantities of sediment from entering the intake and avoid the occasional obstruction of the intake requiring mechanical removal of sediment material. The replacement spillway will support the future construction of a separate upland fine-sediment and fish exclusion system that will return sediment and fish to the river instead of entering the flume. In addition, the existing riverbank protection along the left bank, both upstream and downstream of the diversion, would be repaired and replaced with a concrete wall system and rock rip-rap. A complete set of project plan schematics is provided in addition to this checklist.

7. Location of proposal, and directions to the site. Give sufficient information for a person to understand the precise location of your proposed project. If a proposal would occur over a range of area, provide the range or boundaries of the site(s).

The Electron Diversion is located in Section 3, Township 16, Range 6 East on the Puyallup River. The site is on private property surrounded by other private timber property. Access to the site is controlled and all visitors must be escorted by Electron Hydro personnel. Please Call Mr. Thom Fischer at 360-739-9777 to arrange a visit.

ENVIRONMENTAL ELEMENTS

1. **EARTH**

a. General description of the site (circle one): flat, rolling, hilly, steep slopes, mountainous, other:

The site is a nearly flat to gently sloping river channel corridor with adjacent hillside

slopes of between 25-60%. All work areas are on nearly flat or very gently sloping terrain.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slopes on the site are approximately 60% side slopes. These occur along the adjacent hills, not in the work zone.

c. What general types of soils are found on the site (for example; clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

All project work areas are either presently sand/gravel/cobble riverbed or adjacent upland river valley bottom land comprised of sand/gravel/cobble and miscellaneous sedimentary materials. The river and work area lay in a previously glaciated valley bottom comprised of mostly washed river sand/gravel/cobble.

d. Are there surface indications or history of unstable soils in the immediate vicinity?
☐ Yes ☒ No If so, describe.

There are no unstable soils in the work areas identified.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation and grading proposed. Indicate source of fill.

The adjacent riverbed both immediately upstream and downstream of the diversion structure would be excavated to provide material to form cofferdams to isolate the work area from the flowing river and provide access for the replacement spillway foundation. Approximately 19,500 cu. yds. would be excavated for all work affecting a total area of about 1.5 acre. 2,860 cu. yds of excavated material would be used to make concrete for the spillway foundation, walls and shoreline protection walls. Approximately 7,700 cu. yds would be used as backfill for newly replaced or repaired structures. Any remaining aggregate would be stockpiled. Stockpiled material would remain on the upland facility site. Some cement materials and rock rip-rap may be imported to the site in minor quantities as needed. For the most part all necessary aggregate and rock are already on-site.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

It is highly unlikely that soil erosion will occur as all riverbed material is essentially washed sand, gravel and cobble. All upland areas that would be used for construction lay-down and stock piling are gravel surfaced or highly pervious sand, gravel and cobble.

g. What percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Less than 1%. The replaced and repaired facilities will not result in any increase of footprint.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

An overall Stormwater Pollution Prevention Plan (SWPP) will be prepared and implemented according to WA State DOE BMP's.

2. **AIR**

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities, if known.

Heavy equipment diesel exhaust emissions, compliant for year of manufacture, intermittent but not prolonged. Similar to logging equipment, i.e. tracked excavators, dump trucks, bulldozer, rock drilling rigs, pumps, compressors, chainsaws and various other power tools. Emissions not quantified, but each machine source compliant for year of tool or equipment manufacture with no intent to modify any emissions controls.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. **WATER**

a. Surface Water:

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, salt water, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state the stream or river into which it flows.

Puyallup River only.

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans for this work.

Yes, see referenced plan schematics.

3. Estimate the amount of fill and dredge material that would be placed in, or removed from, surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material and/or the disposal site.

There would be no discharge to wetlands whatsoever. Sand, gravel & cobble would be moved or excavated from the river to build cofferdams and be used for aggregate for construction of in-river facilities including the replacement spillway and shoreline

protection facilities. All material would remain in the immediate vicinity and either be incorporated into concrete structures, used as backfill or stockpiled for future use.

4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.

The only new diversion would be from temporary cofferdams routing river water around the work areas as needed.

5. Does the proposal lie within a 100-year floodplain? If so, note floodplain location on the site plan.

Yes.

6. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water:

1. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities, if known.

No.

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) is/are expected to serve.

None. No discharges to the environment.

c. Water Runoff (including storm water):

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

All current drainage patterns will remain unchanged. Precipitation predominantly infiltrates and flows sub-surface until intercepted by existing creeks and the river. The dominant soil type in the vicinity is a highly permeable unconsolidated glacial outwash with some areas of sediment sorting due to historic water flow.

2. Could waste materials enter ground or surface waters? If so, generally describe.

No, cofferdams will isolate construction from the river. No other type of waste would be discharged.

3. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface water, groundwater, and runoff impacts, if any:

No drainage controls are anticipated due to the highly permeable nature of the work areas. Containment measures will be provided for fuels, lubricants and any potentially hazardous materials.

4. **PLANTS**

a. Check types of vegetation found on the site and list specific species:

☒ deciduous tree: ☒ alder ☐ aspen ☒ maple

Other: _____

☒ evergreen tree: ☒ fir ☒ cedar ☐ pine

Other: _____

☒ shrubs

☐ grass

☐ pasture

☐ crop or grain

☐ orchards, vineyards or other permanent crops

☐ wet soil plants: ☐ cattail ☐ buttercup ☐ bulrush ☐ skunk cabbage

Other: _____

☐ water plants: ☐ water lily ☐ eelgrass ☐ milfoil

Other: _____

☒ other types of vegetation: _____

b. What kind and amount of vegetation will be removed or altered?

Little or none. No significant new clearing anticipated.

c. List threatened or endangered plant species known to be on or near the site.

None. Work areas are either within the riverbed or on areas previously cleared or logg

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

e. List all noxious weeds and invasive species known to be on or near the site.

Himalayan Blackberry

5. **ANIMALS**

a. Circle any birds or animals that have been observed on or near the site, or that are known to be on or near the site:

Birds: ◉ hawk ○ heron ○ eagle ◉ songbirds ○ other: _____

Mammals: ◉ deer ◉ bear ◉ elk ○ beaver ○ other: _____

Fish: ○ bass ◉ salmon ◉ trout ○ herring ○ shellfish ○ other: _____

b. List any threatened or endangered animal species known to be on or near the site.

Yes. Chinook salmon, steelhead and bulltrout.

c. Is the site part of a migration route? If so, explain.

Yes, for anadromous salmon, steelhead and bull trout.

d. Proposed measures to preserve or enhance wildlife, if any:

A fish exclusion plan to remove fish and prevent them from entering the work area.

e. e. List any invasive animal species known to be on or near the site.

Not known.

6. **ENERGY AND NATURAL RESOURCES**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs?

Diesel, gasoline, portable generators.

Describe whether it will be used for heating, manufacturing, etc.

For heavy equipment and other tools.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The facility as a whole is a renewable energy generator.

7. **ENVIRONMENTAL HEALTH**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire, explosion, spill, or hazardous waste, which could occur because of this proposal? If so, describe.

There would be risks typical of an industrial type construction project including fuel spills, equipment failure, human errors and accidents.

1. Describe any known or possible contamination at the site from present or past uses.

None known to have previously occurred.

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None. There is no other development, utility or facility anywhere nearby.

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Mostly fuels for heavy equipment and tools. Some lubricants and potentially cleaning solvents. All such materials would be stored in a contained secure area.

4. Describe special emergency services that might be required (for example, chemical spills or explosions).

Helicopter medi-vac for a potential human injury might be necessary. General first aid and fire suppression facilities will be maintained on site due to the remote location.

5. Proposed measures to reduce or control environmental health hazards, if any:

The project would maintain emergency first-aid, fire suppression, communications and spill response equipment on site. A helicopter medi-vac pad would be maintained for the duration of the project.

b. Noise

1. What types of noise exist in the area, which may affect your project (for example: traffic, equipment, operation, other)?

The project site is surrounded by commercial forest land with ongoing logging, truck traffic, chainsaws and other forestry noises in the vicinity. No existing source of noise would have any affect on the project.

2. What types and levels of noise would be created by or associated with the project on a short term or a long term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise from heavy equipment excavators, bulldozer, trucks, drill rigs, compressors, generators, impact tools, chainsaws and other power tools would be periodic and sometimes continuous for hours at a time. It is possible that some types of work, such as critical time period in-riverbed work would continue on a 24hr basis until completed due to the relatively short work window permitted. Outside of the river

work window from July 15th to September 15th nearly all other work would be limited to daylight hours only.

3. Proposed measures to reduce or control noise impacts, if any:

The project area is in a secluded location lying low in a river valley surrounded by commercial forest. The timbered surroundings would serve to buffer and screen noise preventing sound scatter beyond around 1/4 mile from the site. The loudest potential noises would be associated with excavation for the spillway replacement and as such would be bunkered by the surrounding riverbed. Based on tabled construction equipment noise generation references, noise is unlikely to travel and be heard more than a quarter mile from the site. All powered equipment will maintain all stock noise suppression mufflers and guards.

8. LAND AND SHORELINE USE

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is used as the head of the diversion works for the Electron Hydropower project. The continued use of the 113 year old diversion facility would not have any affect on the continuing use of the surrounding commercial forest properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The site has remained in the same hydropower use for 113 years. No land use will be converted, no lands will be transferred.

1. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

No change, no affect.

c. Describe any structures on the site.

113 year old wooden diversion structure spanning the river, concrete end walls, steel head gate guards, concrete intake channel, radial control gate, water flume, fish ladder, shoreline protection structures including concrete walls and rip-rap, sediment and rock return chutes, controls and generator building, roadways, bridges, railway on top of flume, waterlines, power lines, outdoor lighting, sanitary facilities, material stockpiles, tool shed, parking areas, gravel work pads, trails, drainage pipes and misc. facility parts & pieces.

d. Will any structures be demolished? If so, what?

35% of the wooden diversion/spillway structure will be removed and replaced.

e. What is the current zoning classification of the site?

Designated Forest Land

f. What is the comprehensive plan designation of the site?

Forestry

g. If applicable, what is the current shoreline master program designation of the site?

High Intensity Designation under the new Pierce Co. Shoreline Master Program

h. Has any part of the site been classified an "environmentally sensitive" area? If so, please specify.

River/Riparian/Shoreline.

i. Approximately how many people would reside or work in the completed project?

Once completed, the site would be predominantly remotely operated with periodic visits for maintenance and monitoring. There would not be any permanent occupancy. Typical maintenance procedures would be performed by 1-6 persons.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The hydropower project is inherently compatible with the surrounding commercial forestry, as the project is water dependent whereas forestry harvest is not permitted within the riparian buffer zone. The uses do not conflict or compete for space.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

There are no agricultural uses in proximity.

9. **HOUSING**

a. Approximately how many units would be provided, if any? Indicate whether it would be high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether it would be high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. **AESTHETICS**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

A new bladder spillway 12 ft. in diameter by 70 ft. in length.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. **LIGHT AND GLARE**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Little to none, as reflected from concrete, wood, gravel and some hardware such as railings and grates.

b. Could light or glare from the finished project be a safety hazard, interfere with views, or affect wildlife?

No. There would be minimal exterior and facility lighting, all of which would be directed downward with hooded light fittings.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

Minimal lighting, downward oriented.

12. **RECREATION**

a. What designated and informal recreational opportunities are in the immediate vicinity?

The commercial timber lands surrounding the site are privately owned. Recreational access is allowed by timberland owners on a permit entry only basis. The area is mostly used for hunting. Some other minimal receational uses may be wildlife viewing, mushroom gathering, rock hounding and scenic appreciation.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. **HISTORIC AND CULTURAL PRESERVATION**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

The diversion structure and some associated facilities are 113 years old. The diversion is not listed as a national historic property and is not listed or proposed for preservation at this time.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

Throughout the history of the project there has not been any finding of any prior cultural use or encampment within the immediate area. No Tribe or other cultural group has made any reference to the site being of cultural resource significance or value. The local Puyallup Tribe has been active in the management of the fishery and maintenance of the facility fish ladder at this location and have not expressed any concern for potential cultural resources. The proposed project repairs and spillway replacement has been shown to the Tribe and has not been a concern from a cultural resources standpoint.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

We have searched the Washington State Department of Archaeology & Historic Preservation data base for information about this site with no results. A cultural resources survey has been performed for the construction site and is included with the application materials.

c. Proposed measures to avoid, minimize, or compensate for loss, changes to , and disturbance to resources. Please include plans for the above and any permits that may be required.

A photo record of the removal of the old spillway and diversion structure section will be collected and recorded for any future interest in the history of the structure.

14. **TRANSPORTATION**

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

None, private logging roads only.

b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. 10 miles.

c. How many parking spaces would the completed project or non-project proposal have? No new spaces.

How many would the project eliminate? None, approximately 20 will be maintained.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? Less than 5.

If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

Work shift arrival & departure times, typically morning & evening during construction, few to no daily trips upon completion of the project.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. **PUBLIC SERVICES**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe:

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. **UTILITIES**

a. Identify existing utilities by name including: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system; other:

None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general utility construction activities on the site or in the immediate vicinity that might be needed.

Repair and replacement of a hydropower project diversion, spillway and shoreline protection.

SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Chris Spens

Name of signee: Chris Spens

Position and Agency/Organization: Licensing Manager for Electron Hydro

Date Submitted: 3/27/2017